

Claims

1-18 Canceled

19. (New) A method for identifying hydraulic defects in electrohydraulic brake systems for motor vehicles including an electronic regulation and control unit, wheel brakes equipped with one or more inlet valves and outlet valves and at least one pressure source, the method comprising:

identifying a defect pattern by comparing several hydraulic and electric nominal values with actual values measured by sensors in an electronic regulation and control unit;

selecting a testing routine which corresponds to the defect pattern and execution thereof;

localizing one more individual defects causing the defect pattern; and

selecting an operating mode which takes into account the one or more individual defects causing defects and operation of the brake system in this operating mode.
20. (New) A method according to claim 19, wherein different priorities are assigned to the defect patterns, and in a coordinated termination of the performed testing routine is arranged for when a defect pattern with a higher priority appears.
21. (New) The method according to claim 19, wherein a coordinated termination of the performed testing routine is arranged for in the event of an interaction of the operator.
22. (New) The method according to claim 21, wherein the coordinated termination is performed by making the brake system adopt the same condition as before the commencement of the testing routine that is to be stopped.

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23. (New) The method according to claim 19, wherein the testing routine checks the hydraulic components which are associated with a defect pattern in terms of operability or modifies control strategies in order to find the individual causing defect.
24. (New) The method according to claim 23, wherein the testing routines run without being noticed by the operator and maintain a maximum possible braking power, or are alternatively performed when the motor vehicle is in a condition in which the effects of the testing routines performed will not induce any dangerous driving situation.
25. (New) The method according to claim 19, wherein after the successful localization of the individual causing defect, additional, newly identified defect patterns are processed.
26. (New) The method according to claim 19, wherein after an abortive localization of the individual causing defect, a limited quantity of individual defects will be taken into account by an operating mode until an appropriate testing situation is available to localize the individual causing defect.
27. (New) The method according to claim 19, wherein the defect pattern is represented by an actual pressure value (p_{actual}) measured by a pressure sensor (19, 30, 31, 35) and differing in at least one wheel brake (7, 8) from a preset nominal pressure value (p_{nominal}).
28. (New) The method according to claim 19, wherein the defect pattern is represented by a volume input in at least one wheel brake (7, 8) which exceeds the volume input that is predetermined by the constructive design of the wheel brake (7, 8).
29. (New) The method according to claim 19, the defect pattern is represented by a

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rising pressure value in at least one wheel brake (7, 8) in absence of a braking request of a driver.

30. (New) The method according to claim 19, wherein the pressure source is a high-pressure accumulator (21), and the defect pattern is represented by a declining volume in the high-pressure accumulator (21), with the inlet valves (17, 18) being simultaneously closed.
31. (New) The method according to claim 19, wherein the pressure source is a hydraulic motor-and-pump-assembly (20), and the defect pattern is represented by a deviation of the measured performance under load from the predetermined performance under load or by an insufficient feed performance of the hydraulic motor-and-pump assembly (20).
32. (New) The method according to claim 19, wherein the pressure source is a master brake cylinder (2) with at least one piston (9, 10), and the defect pattern is represented by a deviation of the actual pressure value determined in the master brake cylinder compared to the nominal pressure value that is expected on account of the measured displacement travel of the piston (9).
33. (New) An electrohydraulic brake system for a motor vehicle comprising:
 - an electronic regulation and control unit (16);
 - wheel brakes (7, 8) equipped with inlet valves (17, 18) and outlet valves (27, 28);
 - at least one pressure source;
 - a device to identify a defect pattern by comparing several hydraulic and electric nominal values with actual values measured by sensors in the electronic regulation and control unit (16);

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a device for selecting a testing routine which corresponds to the defect pattern and execution thereof;

a device for localizing an individual defect causing the defect pattern; and

a device for selecting an operating mode which takes into account the individual causing defect, and for the operation of the brake system in this operating mode.

34. (New) The device according to claim 33, wherein an additional device is provided which assigns different priorities to the defect patterns and perform a coordinated termination of the performed testing routine when a defect pattern with a higher priority appears.
35. (New) The device according to claim 33, wherein the device for performing the coordinated termination by making the brake system adopt the same condition as before the commencement of the testing routine that is to be stopped.
36. (New) The device according to claim 33, wherein active tests in the brake system are performed or control strategies are modified in order to find the individual causing defect.